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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/961,395	09/25/2001	Harald Jakob	P 265258 000345 PV	5500
909	7590	01/04/2005	EXAMINER	
PILLSBURY WINTHROP, LLP			LISH, PETER J	
P.O. BOX 10500			ART UNIT	
MCLEAN, VA 22102			PAPER NUMBER	
			1754	

DATE MAILED: 01/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/961,395

Applicant(s)

JAKOB ET AL.

Examiner

Peter J Lish

Art Unit

1754

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 20 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-5, 7-9 and 11-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-9, and 11-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/20/04 has been entered.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 5, 7-9, and 11-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bewersdorf et al. (US 5,560,896) in view of Bewersdorf et al. (USPN 5,714,201).

Bewersdorf ('896) teaches a process for the production of sodium percarbonate. The process comprises spraying an aqueous sodium carbonate solution and a hydrogen peroxide solution onto nuclei in a fluidized bed and evaporating the water. The process utilizes a ternary atomizer nozzle, which allows the solutions to be sprayed through separate channels in order to provide external mixing of the solution, thus preventing the need for condensed phosphates. The hydrogen peroxide solution customarily contains 30-75 % by weight hydrogen peroxide, while

Art Unit: 1754

the sodium carbonate solution contains above 10 %, and especially preferred about 30 %, by weight sodium carbonate. The fluidized bed is maintained at a temperature of between 40 and 95 °C. If needed, additives can be added to either of the hydrogen peroxide and sodium carbonate solutions in order to influence the product qualities and especially to elevate active oxygen stability. The preferred additives are magnesium salts, usually added to the hydrogen peroxide in the form of the sulfate, and water glass, usually added to the sodium carbonate solution.

The amount of the magnesium salt stabilizer is not explicitly taught by Bewersdorf et al., however, it would have been obvious to one of ordinary skill at the time of invention to use an amount between 50 and 2000 ppm, or more specifically between 200 and 1000 ppm, based on the product, as doing so is viewed to be the optimization of a known process, which could have been determined through routine experimentation, and is held to be obvious by *In re Boesch* 205 USPQ 215.

Bewersdorf et al. '896 do not teach the specific amount of waterglass to be added or the module of the waterglass. Bewersdorf et al. '201 teach a similar fluidized bed process with the addition of a sodium silicate with a modulus between 1 and 3 to an aqueous solution. The sodium silicate is introduced in an amount between 0.1 and 2.5 wt%, preferably between 0.5 and 1 wt%, in each case calculated as SiO<sub>2</sub> and relative to sodium percarbonate (column 4, lines 5-11). It would have been obvious to one of ordinary skill in the art at the time of invention to add the sodium silicate, or water glass, as a stabilizer in the process of Bewersdorf et al '896, in the amounts taught by Bewersdorf et al. '201, in order to accomplish the desired effect of the additive.

Art Unit: 1754

Regarding claims 8-11 and 18-19, it is expected that the sodium percarbonate produced by the process of Bewersdorf et al., as above, will have identical properties to those claimed, as they are produced by the same process.

Claims 1-3, 5, 7-9, and 11-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bewersdorf et al. ('896) in view of Brichard et al. (US 4,428,914) and further in view of Bewersdorf et al. (USPN 5,714,201).

Bewersdorf teaches a process for the production of sodium percarbonate. The process comprises spraying an aqueous sodium carbonate solution and a hydrogen peroxide solution onto nuclei in a fluidized bed and evaporating the water. The process utilizes a ternary atomizer nozzle, which allows the solutions to be sprayed through separate channels in order to provide external mixing of the solution, thus preventing the need for condensed phosphates. The hydrogen peroxide solution customarily contains 30-75 % by weight hydrogen peroxide, while the sodium carbonate solution contains above 10 %, and especially preferred about 30 %, by weight sodium carbonate. The fluidized bed is maintained at a temperature of between 40 and 95 °C. If needed, additives can be added to either of the hydrogen peroxide and sodium carbonate solutions in order to influence the product qualities and especially to elevate active oxygen stability. The preferred additives are magnesium salts, usually added to the hydrogen peroxide in the form of the sulfate, and water glass, usually added to the sodium carbonate solution. Bewersdorf et al. does not explicitly teach the amounts of these additives.

Brichard, in a similar process, teaches that additives, such as stabilizers of magnesium sulfate and waterglass are added to the aqueous solutions. The stabilizers are generally added in

Art Unit: 1754

amounts between about 1-20 g of stabilizer per kg of sodium percarbonate product, which is equivalent to between 100 - 20,000 ppm (column 4, lines 19-31). It would have been obvious to one of ordinary skill at the time of invention in the process of Bewersdorf et al. to add the stabilizers in an amount corresponding to the amount generally used, as taught by Brichard et al. to accomplish the desired effect of the additives.

Bewersdorf et al. '896 do not teach the specific amount of waterglass to be added or the module of the waterglass. Bewersdorf et al. '201 teach a similar fluidized bed process with the addition of a sodium silicate with a modulus between 1 and 3 to an aqueous solution. The sodium silicate is introduced in an amount between 0.1 and 2.5 wt%, preferably between 0.5 and 1 wt%, in each case calculated as  $\text{SiO}_2$  and relative to sodium percarbonate (column 4, lines 5-11). It would have been obvious to one of ordinary skill in the art at the time of invention to add the sodium silicate, or water glass, as a stabilizer in the process of Brewersdorf et al '896, in the amounts taught by Bewersdorf et al. '201, in order to accomplish the desired effect of the additive.

Regarding claims 8-11 and 18-19, it is expected that the sodium percarbonate produced by the process of Bewersdorf et al., as above, will have identical properties to those claimed, as they are produced by the same process.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bewersdorf et al. ('896) in view of Brichard et al. and further in view of Bewersdorf et al. ('201) or Bewersdorf et al. ('896) in view of Bewersdorf et al. ('201) as applied to claim 1 above, and further in view of Horne et al. (US 6,413,927).

Bewersdorf et al. teaches that the stabilizing additives may include complexing agents. Bewersdorf et al. does not explicitly teach the list of complexing agents useful as stabilizers. Horne et al. teaches that the percarbonate particles may include a variety of stabilizers, including magnesium salts, alkali silicates (i.e. waterglass), and many of the complexing agents listed in claim 4 (column 6, lines 7-25). It would have been obvious to one of ordinary skill to use a complexing agent from the list of useful stabilizers taught by Horne et al., in the process of Bewersdorf et al., as they meet the desired effect of providing stabilization to the products.

### ***Response to Arguments***

Applicant's arguments filed 12/20/04 have been fully considered but they are not persuasive. The applicants argue that Bewersdorf et al. ('201) teaches only the use of waterglass having a specific modulus in the process of coating of sodium percarbonate particles and not in the production of the particles themselves. This is not seen to be the case. Bewersdorf specifically states that the waterglass may be added as stabilizer by fluidized bed spray granulation (abstract) in a manner identical to that claimed by the applicants. Bewersdorf teaches that an alkali metal silicate solution having a modulus in the range from less than 3 to greater than 1, preferably a water glass solution having a modulus in the range from 1.5 to 2.3, may be integrated into conventional processes for the production of sodium percarbonate in a fluidized bed. In known fluidized bed processes, an aqueous hydrogen peroxide solution and an aqueous sodium carbonate solution are sprayed into a fluidized bed dryer with simultaneous vaporization of water. The alkali metal silicate solution is added to the one of the solutions, preferably to the latter. The introduced quantity of alkali metal silicate is in the range between

Art Unit: 1754

0.1 and 5 wt. %, preferably from 0.25 to 2.5 wt. %, in each case calculated as SiO<sub>2</sub> and relative to sodium percarbonate. The sodium silicate solution preferably used has a modulus in the range from less than 2 and greater than 1.5, such as a conventional commercial solution having a modulus of 1.8 (column 3, lines 11-35). No difference is seen between the addition of waterglass as a stabilizer in the spray granulation process of Bewersdorf et al. and that of the instantly claimed invention.


### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter J Lish whose telephone number is 571-272-1354. The examiner can normally be reached on 9:00-6:00 Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman can be reached on 571-272-1358. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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